

9 Soviet One-Orbit Shots Hint Testing for Warhead Re-Entry

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Special to The New York Times

WASHINGTON, Oct. 16— not prohibit the engineering tests necessary to learn how to station weapons in orbit and call them down at will on specific targets.

The mystery of what the Soviet Union is trying to achieve with a series of one-orbit space shots has deepened since the first flight 13 months ago.

Most analysts here now believe the flights are exploring the techniques of bringing down a nuclear warhead from an orbiting platform.

Until recently there had been considerable disagreement about the purpose of the shots. But the analysts believe they have narrowed down the possible explanations.

Nine shots have been fired in the series since Sept. 17, 1966.

At first, Western experts thought the Soviet Union was attempting to disguise the fact of the flights as well as their purpose. Now, however, they believe the Soviet wants the United States to be aware of the flights, but they do not know why.

Ironically, the Soviet tests would not violate the space treaty put into effect in a White House ceremony last week, even if they are military tests of warhead re-entry techniques.

The treaty, signed by 84 nations, prohibits the stationing in orbit of weapons of mass destruction. But it does

unannounced shots on Sept. 17 and Nov. 2, 1966. Both launching vehicles apparently exploded in orbit, accidentally or on command from the ground.

Since then there have been seven shots, the last on Sept. 22. The Soviet Union announced each of them, disguising them as Cosmos scientific satellites but using an announcement format different enough from that used for ordinary Cosmos satellites to convince Western experts that the difference was intended to call attention to the shots.

The experts here say they will not be certain of the purpose of this test series until some new flight characteristics are exhibited—perhaps a greater number of orbits before re-entry or the use of a larger launching vehicle.

The treaty does not define "outer space." This task was left to later negotiations. But the treaty is clear on the point that an object is not considered to be in outer space unless it remains in orbit.

Thus the payloads sent aloft in the nine Soviet shots, which have been returned to earth before they completed one circuit of the earth, would not be subject to limitations of the treaty, even if they were live nuclear weapons.

There is no indication that live weapons, either nuclear or conventional, have been used in the Soviet tests. Experts here point out that it would not be necessary to use live weapons, since dummy warheads could test methods for sending weapons into almost complete orbits and guiding them down to precise targets.

The Soviet flights began with